

Appl. No. 09 / 287,478
Amdt. Dated: Sep 22, 2004
Reply to Office action of Apr. 11, 2005, mailed Apr 22, 2005

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REMARKS-General

Overall response regarding S103 Claims Rejections:

The citation of Lawman (672) is actually an excellent argument in favor of the novelty and non-obviousness of the present invention, since Xilinx was apparently aware (see appnote reference below) of the inability of their XPCI applet to work behind corporate firewalls. In 1999, ChipCenter (formerly EDTN), part owned by CMP Media, was the sole client for the technology of the present invention, which was being used in HTML "interactive articles" to permit user simulation of circuit ideas explained in the text. Towards the end of 1999, Xilinx became the primary sponsor of this site (at the same time they were prosecuting the predecessor to (672), and they were very interested in the present invention—discussions took place about making the technology available directly to Xilinx. Those discussions did not produce a new sale, though they continued to sponsor the site for some time after and their interest validates the novelty and non-obviousness of the present invention relative to Lawman (672). Synopsys was also interested at this time.

The most general arguments for non-obviousness remain the size of the electronics industry (multiple 100's of billions of dollars in 1997) and the high visibility of the internet in 1997. This Lack of Prior Implementation points to an Assumed Unworkability, which applicant posits as a possible failure to appreciate the cumulative increase in performance of mainstream CPUs, coupled with a widely held underestimation of the potential of the WWW for client-server interaction.

The present invention has no pretensions to claiming the invention of CAD using a web browser, and has in fact disclosed prior art in this regard. The prior art, as was the case with Van Huben and now Lawman (672), typically requires administered accounts for security and resource limiting purposes, whereas the present invention does not have

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these limitations. Consequently CPU-intensive activities such as circuit simulation can be made publicly available, which is a new frontier for CAD. Lawman (672) specifically discusses the need for login accounts. Unfortunately, the present invention included an optional login step which the applicant would consider removing for clarity if it would not be considered "new matter".

After further reflection, applicant believes the blandness of the phrase "Unique Identifier" may be the core obstacle to allowability and so has modified claims 1, 10 and 15 to make explicit that the Unique Identifier is something that is transmitted at the Stateless Protocol level and so can in no way be construed as any part of traditional client-server communication.

Regarding "As per claim 1",

Lawman's (672) sole advantage over Van Huben (201) is the demonstration of a Java applet used to contact a remote server for CAD purposes, but Lawman does not teach anything about how the applet communicates with the server and in particular it does not address a need to dynamically synthesize an identifier, which would likely be superfluous since Lawman specifically discusses the use of "access passwords" (C7:L50 – C8:L11), which would seem to imply the existence of accounts. In fact, Xilinx's own app notes would appear to disclose an inability to communicate via a (HTTP) proxy server.

Regarding "As per claim 2",

The novelty of this claim depends on Claim 1.

Regarding "As per claim 3",

Lawman does demonstrate various user interfaces compatible with multiple operating systems, apparently by means of a Java applet (inferred from Fig. 6, and various "Unsigned Java Applet" messages in other Figures). Cross-platform functionality is

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intrinsic to Java and HTML. Critically, however, an explanation of the networking details is absent in Lawman, and so cannot be considered taught.

Fig. 6:

"XPCI Web Based Programming Interface Applet \$Id:
xpciClient.java, v 1.3 1997/01/24 16:41:12"

Regarding "As per claims 4-6",

Applets have multiple connectivity options in contacting a server:

- 1) With ordinary applet privileges, an applet may open a connection to the server from which it was loaded. With full privileges (not the default, nor apparently the case here as it requires a signed applet), an applet may open a server socket and make contact to any port on any machine on the Internet. Opening sockets for communication is traditional behavior for client-server applications and is not in general compatible with proxy servers. I have found this on a foreign website, which appears to be a copy of an old Xilinx appnote regarding XPCI (relevant portion)

(From
<http://www.nalanda.nitc.ac.in/industry/appnotes/xilinx/documents/techdocs/7436.htm>)

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#7436

Solution 1:

This error can occur while trying to access the PCI Web Core Generator from behind a corporate firewall. The Xilinx CORE Generator applet must establish a socket connection directly with the server at www.xilinx.com. Some corporate firewalls block these type of connections.

There are currently a couple of workarounds:

- 1) Verify with the system administrator that the firewall does not block socket connections.
- 2) Access the PCI Core Generator from another ISP which allows socket connections

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3) Contact the hotline with your PCI Lounge username, password, and details of what core you wish to download, and have them generate the core and email it to you.

- 2) An applet may contact a server using the ordinary CGI GET / POST mechanism, which does not by default cause any preservation of state on the server, and in many cases this is sufficient. Certainly it could have proved sufficient for Lawman, et al, to simply spawn a traditional CGI process which after running for some time on the server returned results directly, or emailed them. Because it was required that the user log on to his or her account, there was no need to create a "Unique Identifier".
- 3) The present invention also makes use of the CGI mechanism, but adds an automatically assigned unique identifier for a multiplicity of purposes, amongst which is management of state on the server in the absence of an open socket connection or login account. Lawman neither teaches nor anticipates the need for a dynamically assigned unique identifier at the application level.

Regarding "As per claim 7"

Use of the word database in Lawman is essentially restricted to "design database", equivalent for the present invention to a submission of user data. What is referred to as a database in the present invention is something with a completely different purpose, that of storing auditing data.

Regarding "As per claim 8",

As previously noted, van Huben does not teach lowering of process priority based on usage. Van Huben's resource/attribute tables appear directed at preventing deadlock by enabling or disabling entire processes according to resource availability, rather than adjusting process priority.

Regarding "As per claim 9",

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Lawman does not teach the synthesis of a circuit that is transmitted to the client for editing within a browser window for subsequent simulation.

Regarding "As per claim 10",

The issues are essentially the same as in 1: Lawman does not in fact teach the use of an on-demand synthesized or created Unique Identifier, instead he refers to passwords, a traditional method part of the prior art.

Regarding "As per claim 11",

As previously noted, the privileges described herein need not be assigned by an account manager. These privileges may be derived by domain, from a "ticket" (perhaps stored in a cookie by another process), or by means of the link the user used to reach the first interface page, etc.

Regarding "As per claim 12",

Neither Lawman nor van Huben say anything about cookies.

Regarding "As per claim 13",

Lawman discusses log files in two contexts – the saving of error messages and the reading of data from IC. In the first case, the error messages can be used for debugging, but Lawman says nothing about marketing or sales.

Regarding "As per claim 14",

It is true that Lawman discloses the use of passwords to access the XPCI applet. But there is no transmission of a Stateless Communications Protocol-compatible Unique Identifier.

Regarding "As per claim 15",

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The issues are essentially the same as in 1: Lawman does not in fact teach the use of an on-demand synthesized or created Unique Identifier, instead he refers to passwords, a traditional method part of the prior art.

Regarding "As per claim 16",

As previously noted, applicant does believe it is possible for a single user of the IBM DCS to initiate multiple simultaneous processes, but as there is no attached citation, and a search for keywords could not discover any discussion of automatic elimination of multiple simulations or other processes.

Conclusion:

We continue to hold that the present application Solves a Different Problem from any of the references attached in the office action and moreover that the field is a Crowded Art in which the methods disclosed are a significant advance over what came before. In particular the dynamically and automatically assigned, transient Unique Identifier in the managed public use of simulation systems is a New Principle of Operation for such systems. We have modified the claims to as to eliminate any possible remaining confusion regarding the type of "Unique Identifier" mentioned therein and logon accounts, internet addresses and any other non-(cookie / PATH-INFO / PATH-EXTRA) data.

In particular, we feel that the van Huben patent, while comprehensive in its own domain of library management and batch control of a CAD environment with traditional administrator-assigned accounts, actually Teaches Away from the present invention which has the different focus of interactive public simulation. The Lawman patent in fact highlights the advantages of the present invention as endorsed by Xilinx's contemporary sponsorship of the Chipcenter site using the present technology.

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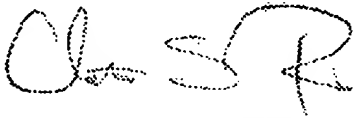
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At the time of conception, there was a widespread Assumed Unworkability in interactively controlling server CAD simulation from an HTTP-based internet client. This, plus the non-obviousness of the disclosed methods, explain a Lack of Implementation of simulation tools prior to the advent of the present invention.

Conditional Request for Constructive Assistance:

The applicant has amended the Background and the Claims so that they are proper, definite and define novel methods which are also unobvious. If, for any reason this application is not believed to be in full condition for allowance, applicant respectfully requests the constructive assistance and suggestion of the Examiner pursuant to M.P.E.P. S2173.02 and S707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Very respectfully,



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